CSCI 410 Pattern Recognition

Assignment Two

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Part I Single Feature

1. Create a matlab script that will perform each of the steps required for this exercise.
2. Load 'partOneData.mat' into the matlab environment (previously used for assignment one).
3. Generate a random partition of the data, splitting each of the classes into 60% training and 40% testing.
    a. Using only the training data, classify each of the test samples using the K-Nearest Neighbor Classifier.
    b. Use the Euclidean Distance as the distance metric.
    c. Print out the total prediction accuracy using the fprintf commands.

Part II Multivariate

1. Create a matlab script that will perform each of the steps required for this exercise.
2. Load 'partTwoData.mat' into the matlab environment (previously used for assignment one).
3. Create a random partition of the data, splitting each of the classes into 60% training and 40% testing.
    a. Using only the training data, classify each of the test samples using the K-Nearest Neighbor Classifier with k = 1.
    b. Use the Euclidean Distance as the distance metric.
    c. Print out the total prediction accuracy using the fprintf commands.

Turn-in:

- A matlab script that performs the necessary steps for part one
- A matlab script that performs the necessary steps for part two
- A single word document showing a print screen of the execution for each of the above scripts